



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,318	07/07/2003	Chi Au	MAL1P001	9359
28875	7590	01/25/2006	EXAMINER	
Zilka-Kotab, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			KIM, ELLEN E	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,318	AU ET AL.	
	Examiner	Art Unit	
	Ellen Kim	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-13 and 29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-13 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 3,4,14-28,30 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is responsive to Applicant's amendment filed on 11/16/05.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5-13, and 29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Liao et al [USPAT 6,324,312].

Liao et al disclose an optical system and the method comprising:

A first branch 16 [front drawing] having a n_1 including a first end and a second end;

A second branch waveguide 10 having a n_2 and having a first end [bottom end] and a second end [top end];

wherein the second end of the second branch coupled to the first branch to from an angle, and any light passing in the reverse direction from the first branch to the second branch [inherent because n_1 is greater than n_2].

Note that the claimed relationships between the angle and the refractive indices are inherently shown by Liao et al device because n_1 is greater than n_2 .

In re claim 5, the coupled area of 16 and 10 are inherently functioning as an absorber.

In re claim 6, Applicant fails to define the definition of "isolation" in the claim. There should be an isolation between the first and second branch.

In re claim 7, it is not clear whether it is the device or method claim. The numerical aperture of the branches are inherently shown.

In re claim 8, some area of the branch 16 is tapered [decreased].

In re claims 9 and 10, again Applicant fails to define the definition of "optical choker" in the claim. Examiner considers the end part of the ends of the first and second branch as an optical choker.

In re claims 11 and 12, Liao et al show all the claimed limitation, therefore, the Liao et al device inherently functions as an optical isolator and optical attenuator.

In re claim 13, Liao et al show in 3A and 3B rectangular cross-sections.

In re claim 29, Liao et al inherently show the method steps.

Response to Arguments

Applicant's arguments filed 11/16/05 have been fully considered but they are not persuasive. Applicant argues that Liao fails to show "a first branch capable of allowing light to pass therethrough in a forward direction and a reverse direction" and "a second branch capable of allowing light to pass therethrough in the forward direction".

Examiner does not agree with Applicant's argument because Liao clearly shows the first waveguide branch 16 and the second waveguide branch 10, and it is clear that any waveguide *is capable of* allowing light pass therethrough in a forward direction and a reverse direction. Applicant is required to provide any evidence why those waveguides 10 and 16 are not capable of allowing light pass therethrough in a forward direction and a reverse direction.

Applicant further argues that merely because Liao allegedly utilizes an $n_2 < n_1$ condition does not inherently provide the claimed limitation.

Examiner acknowledges that there is difference in the Applicant's invention and the Liao's device. The claimed limitations are however shown by Liao's device. For instance, Applicant claims that "*any light passing* in the reverse direction from the first branch to the second branch forming an incident angle θ_1 ; wherein ...". Note that since Applicant claims "...any light...", Examiner picks light going from the first branch to the second branch forming an incident angle, which is forms 180° . Then the claimed relationship is met by in any value of n_2 and n_1 as long as $n_1 > n_2$.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2874

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349. The examiner can normally be reached on Monday through Thursday.

Ellen E. Kim
Primary Examiner
January 21, 2006/EK

A handwritten signature in black ink, appearing to be 'E. Kim', written over the printed name and title.